

VIII.—*Note on Myxotrichum chartarum (Kunze).*

By ARTHUR H. CHURCH, B.A. Oxon., F.C.S.

[Plate VI.]

MY attention was first directed to this beautiful fungus by my friend Mr. Northcote, of Queen's College, Oxford, who noticed its occurrence on damp cotton fibres: it is generally found on damp straw or paper. It was first figured by Kunze, and afterwards by Corda. As the works of these authors are not easily accessible, I thought that a careful drawing, traced from the plant itself by means of the camera lucida, might prove acceptable to British fungologists. Plate VI. fig. 1 represents three plants of their natural size; fig. 2, the same three plants slightly enlarged; and fig. 3, a single plant magnified 400 diameters.

The fungus is of a deep-brown colour, and horny texture. The mycelium is dichotomously branched for the most part; and the original portions of it increase centrifugally, so that the mature plant finally assumes the spherical form. Among the growing points of the mycelium which make up this sphere, from three to thirty processes of singular form project. These hooks are curved more or less spirally at their outer extremities, and are divided transversely into nine or ten segments. Fig. 4 shows a branched spiral hook ("zusammengerollter Haken" of Corda), separated from the mass of mycelium, and magnified 800 diameters. Corda's figure*, which is not altogether satisfactory, does not disclose any segmentation of the spirals; he describes only the separation that can be effected between their outer and inner parts. Towards the centre of the fungus, when mature, a confused yellow mass may be noticed. When this yellow mass is carefully separated from the flocci, and a portion of it examined, it appears to consist of thin fragile sacs of a clear deep-yellow colour; these soon burst and set free a number of white or grey oval bodies: the latter I take to be spores, the former a kind of enveloping membrane, resembling the cyst in *Badhamia*. Figs. 5 *a* and 5 *b* represent these spores, and fig. 5 *c* the supposed spore-sacs after they have discharged their contents. The spores readily vegetate among damp cotton-fibres; and I have raised from them a new supply of the fungus: fig. 6 represents two young plants. The yellow bodies here referred to are apparently identical with those described by Corda as spores: he speaks of them as of a golden-yellow colour, and attached, in compound chains of a branching form, to certain central portions of the mycelium. I have not yet been able to discover them *in situ*, and I must leave their true relations an open question. Moreover the septate character (not recognized

* *Icones Fungorum*, tom. vi. tab. 2. fig. 23. 4 *d*.

by Corda) of the spirals renders it necessary to view these appendages also in another light; in fact, this character seems to connect *Myxotrichum* with *Helicosporium* and similar genera, where the filaments bear strings of sporidia coiled up into spirals, and at the same time to show, as indicated in fig. 4. Pl. VI., the intimate connexion subsisting between the ordinary spores of the Hyphomycetes, whether arranged in chains or occurring singly, and the bodies termed *conidia*.

Hitherto our information concerning the position of this fungus has been but scanty. In the 'Micrographic Dictionary' of Griffith and Henfrey (ed. 2, p. 483), the genus *Myxotrichum*, to which our present species was referred by Kunze, is thus noticed:—"A genus of Dematiei, growing on rotten wood, paper, &c. Three species are described as British—*M. caesium*, Fr., *M. chartarum*, Kze., and *M. deflexum*, Berk. They form little tufts or downy balls, sending off radiating branched filaments. The spores are described as occurring collected in masses about the base of the threads (?)." In Mr. Berkeley's 'British Fungology' (p. 353), the genus *Myxotrichum* is referred to the Mucedines, and its characters given as follows:—"Flocci branched, bearing towards their base little conglomerate masses of spores." Corda placed his genus *Actinospira* among the Sporotrichaceæ, describing it thus:—

"ACTINOSPIRA. Flocci ramosi, continui, cornei; sporis simplicibus, basi in glomerulos coloratos heterogeneos conglutinatis.

"*A. chartarum*, Corda, tom. vi. tab. 2. fig. 23. Acervulis subglobosis; sporis oideis aureis."

Mr. Berkeley, to whom I am indebted for my information as to the history of the present plant, tells me that it is supposed to be a condition of some *Chatomium*. I hope my observations and the figure given may aid in determining its true relations.

Mr. Berkeley's *Ascotricha chartarum** presents, in the appearance of the thallus and conidia†, a slight approach to the character of the young plants of *Myxotrichum* figured in my drawing; but the genera to which the plants belong are, so far as present observations go, quite distinct.

IX.—*Observations on a Species of Pycnogon (Phoxichilidium coccineum, Johnston), with an attempt to explain the Order of its Development.* By GEORGE HODGE.

[Plates IV. & V.]

THE generation and development of the Pycnogonoidea, to the best of my knowledge, have hitherto received a very small share

* Ann. Nat. Hist. ser. 1. vol. i. pl. 7, p. 257. † *Ib.* pl. 7. fig. 8 d.